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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,662	02/17/2000	Motoya Iwasaki	Q57879	7451

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Sughrue Moin Zinn Macpeak & Seas
2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER

TRAN, THIEN D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/505,662

Applicant(s)

IWASAKI, MOTOYA

Examiner

Thien D Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being participated by Kobayakawa et al (U.S Patent No. 6,064,338).

Regarding claims 1, 2 Kobayakawa discloses a receiver comprising:

despreading code calculating means for calculating a code for despreading a reception signal based on delays given to the reception signal over a plurality of transmission paths through which the reception signal is transmitted and calculated weights (coefficients) representing respective phase/amplitude ratios of the transmission paths (figure 4, col.10 lines 1-15);

despreading means for despreading the reception signal using the code calculated by said despreading code calculating means; and

integrating means for integrating the reception signal despread by said despreading means. See col.6 lines 20-60.

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Regarding claim 3, Kobayakawa discloses that despreading code calculating means comprises:

a plurality of delay means for adding the delays over the transmission paths to a complex conjugate value of a spreading code used when the reception signal is transmitted, and outputting delayed signals;

a plurality of multiplying means for multiplying the delayed signals outputted from said delay means by complex conjugate values of the coefficients representing the respective phase/amplitude ratios of the transmission paths, and outputting product signals; and

adding means for adding the product signals outputted from said multiplying means, and outputting the sum as the code for despreading the reception signal. See col.8 line 30 to col.9 line 10.

Regarding claim 4, Kobayakawa discloses memory means for storing the code outputted from said despreading code calculating means, said despreading means comprising means for despreading said reception signal using the code stored by said memory means. See col.6 lines 20-35.

Regarding claim 5, Kobayakawa discloses memory means for storing the code outputted from said adding means, said despreading means comprising means for despreading said reception signal using the code stored by said memory means. See col.10 lines 20-40.

Regarding claims 6, 7, Kobayakawa discloses that there are as many said delay means and said multiplying means as the number of the transmission paths. See col.11 lines 1-10.

Response to Arguments

3. Applicant's arguments filed 06/24/2003 have been fully considered but they are not persuasive.

Applicant argues that Kobayakawa does not teach the code for despreading the reception signal, which is calculated on the basis of delays given to the reception signal over transmission paths and the coefficients representing the respective phase/amplitude ratios of the transmission paths. However, Examiner disagrees with the argument because Kobayakawa discloses the calculation of an adaptive weight code (Note* adaptive weight code is not PN code, the PN code is never being calculated but it is rather being stored fix in memory of the mobile or that it is being transmitted from the base station controller to the mobile for despreading CDMA signals) for using as a despreading performance as follows:

Calculation of the adaptive weight code is based on three delayed multi-paths signals as in equation (1), col.7 lines 1-10 (Note* signals from user i after transmission, they arrive to the base station by different delays because of the reflections with buildings in the area, which cause different in transmission distances);

The calculation of the adaptive weight code is based on coefficients $a1_i$, $a2_i$, and an_i which represent phase/amplitude ratios (Note* the coefficients $a1_i$, $a2_i$, and an_i are

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the same coefficients $a_i \{i=1-n\}$ of equation (3) in the specification on page 4 column

10. The reason why coefficients a_{1i} , a_{2i} , and a_{ni} or coefficients $a_i \{i=1-n\}$

representing the phase/amplitude ratios is that because of the fact that the coefficients

a_{1i} , a_{2i} , and a_{ni} or $a_i \{i=1-n\}$ are the amplitudes of the transmission signals, as the

transmission signals travel along with the distances, amplitudes are degraded due to

the distances, building reflections, changed phases caused by buildings, changed

phases caused by angles of the receiving antennas. Therefore, a_{1i} , a_{2i} , and a_{ni} or

coefficients $a_i \{i=1-n\}$ are the representation of the phase/amplitude ratios).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (703) 308-4388. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thien Tran



**ALPUS H. HSU
PRIMARY EXAMINER**